

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings of claims in the application:

Claim 1. (currently amended) A method of inducing a dopaminergic neuronal fate in a neural stem cell or neural progenitor cell that overexpresses Nurr 1, the method comprising: incubating the cell that overexpresses Nurr 1 ~~expressing Nurr1 above basal levels within the cell,~~ ~~co-culturing the cell~~ with a Type 1 astrocyte of the ventral mesencephalon, and thereby contacting the cell in vitro with one or more factors secreted from said Type 1 astrocyte of the ventral mesencephalon, whereby a significant percentage of the cells that overexpress Nurr 1 are induced to a dopaminergic neuronal fate ~~dopaminergic neurons are produced.~~

Claim 2. (Previously presented) A method according to claim 1 comprising contacting the cell with fibroblast growth factor 8 (FGF8).

Claim 3. (Original) A method according to claim 1 comprising transforming a neural stem cell or neural progenitor cell with Nurr1.

Claim 4. (Canceled)

Claim 5. (Previously presented) A method according to claim 1 wherein the Type 1 astrocyte is immortalized or is of an astrocyte cell line.

Claim 6. (Previously presented) A method according to claim 1 wherein said cell is mitotic when it is contacted with said one or more factors.

Claim 7. (Previously presented) A method according to claim 1 wherein said cell is additionally contacted with one or more agents selected from the group consisting of: basic fibroblast growth factor (bFGF) epidermal growth factor (EGF), an activator of the retinoid X receptor (RXR), and 9-cis retinol.

Claim 8. (Previously presented) A method according to claim 1 wherein said cell is additionally contacted with a member of the fibroblast growth factor (FGF) family of growth factors.

Claim 9. (Original) A method according to claim 8 wherein said cell is contacted with bFGF or EGF, and SR11237.

Claim 10. (Previously presented) A method according to claim 1 wherein the neural stem cell or neural progenitor cell is pretreated with bFGF and/or EGF prior to contacting the cell with one or more factors secreted from a Type 1 astrocyte of the ventral mesencephalon.

Claim 11. (Previously presented) A method according to claim 1 further comprising formulating a dopaminergic neuron produced by the method into a composition comprising one or more additional components.

Claim 12. (Original) A method according to claim 11 wherein the composition comprises a pharmaceutically acceptable excipient.

Claims 13.-69. (Canceled)

Claim 70. (new) The method of claim 1 whereby 5% to 70% of the cells that overexpress Nurr 1 are induced to a dopaminergic neuronal fate.